

## ABSTRACT

A bridge device couples together two buses in which more than one device at a time can assert a bus signal. The bridge includes comparators to drive or assert signals on one bus only if the signal is being asserted by the corresponding signal on the other of said buses. That is, the bridge does not drive a signal on a bus that is already being actively driven by a device coupled to that same bus. However, if a device coupled to the other of the buses drives the signal, then the comparator does drive the signal. The bridge preferably includes one such comparator for each bus signal on both buses. The bridge is particularly well-suited for use in bridging I<sup>2</sup>C buses.

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